

WHAT IS CLAIMED IS:

1. A manufacturing method of a cover layer of optical storage media, comprising the following steps:

(a) providing a substrate;

5 (b) forming a reflective layer on the substrate;

(c) providing a plate having a plain smooth surface;

(d) applying a radiation-setting resin on the reflective layer;

(e) compressing the radiation-setting resin with the plate to form a light-cure resin layer;

10 (f) rotating the resulting structure to form a radiation-setting resin layer of uniform thickness;

(g) hardening the radiation-setting resin layer to form a hardened radiation-setting resin layer which serves as a cover layer; and

15 (h) separating the plate from the hardened radiation-setting resin layer, wherein the hardened radiation-setting resin layer remains adhered to the substrate.

2. The manufacturing method of a cover layer of optical storage media of claim 1, wherein a material of the plate comprises plastic, glass or metal.

3. The manufacturing method of a cover layer of optical storage media of claim 1, wherein a material of the radiation-setting resin comprises epoxy, acrylic resin or
20 polyester.

4. The manufacturing method of a cover layer of optical storage media of claim 1, wherein further comprises the repetition from the step (d) to the step (h) after the step (h).

5. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the average thickness of the cover layer is in a range of about 60 nm to about 150 nm.

6. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the method used in the step (h) to separate the plate from the substrate comprises a center hole blowing film stripping method.

7. The manufacturing method of a cover layer of optical storage media of claim 1, wherein further comprises forming a cover layer on the substrate before the step (d).

8. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a high density blue laser optical information storage media.

9. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the high density blue laser optical information storage media comprises an optical information storage media, wherein the recording and replaying operations for a gallium nitride ("GaN") laser or an ultraviolet ("UV") laser disc system using a high NA larger than 0.5 of an object lens.

10. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the wavelength used by the GaN laser or the UV laser disc system is less than 460 nm.

11. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a recording layer.

12. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a plurality of recording layers.

13. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a digital signal structure.

14. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a read-only structure.

15. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a write-once structure.

5 16. The manufacturing method of a cover layer of optical storage media of claim 1, wherein the substrate is a disc having a re-writable structure.

17. A manufacturing method of a cover layer of optical storage media, comprising the following steps:

(a) providing a substrate;

10 (b) forming a reflective layer on the substrate;

(c) providing a plate having a poorly adhesive layer formed thereon;

(d) applying a radiation-setting resin on the reflective layer;

(e) compressing the radiation-setting resin with the plate to form a light-cure resin layer;

15 (f) rotating the resulting structure to form a radiation-setting resin layer of uniform thickness;

(g) hardening the radiation-setting resin layer to form a hardened radiation-setting resin layer which serves as a cover layer; and

20 (h) separating the plate from the hardened radiation-setting resin layer, wherein the hardened radiation-setting resin layer remains adhered to the substrate.

18. The manufacturing method of a cover layer of optical storage media of claim 17, wherein the material of the poorly adhesive layer comprises gold, silver, aluminum, chromium, platinum, nickel, copper palladium, silicon and alloy thereof.

19. The manufacturing method of a cover layer of optical storage media of claim 18, wherein the poorly adhesive layer further comprises an organic material.

20. The manufacturing method of a cover layer of optical storage media of claim 19, wherein the organic material comprises epoxy resin, acrylic resin, polyester, 5 nitrocellulose, polyvinyl resin, polymethyl methacrylate (PMMA), fluoropolymers or silicone rubber.